# MAXIMUS

# Digital Broadcasting Satellite Receiver

# User's Manual

## 1. Introduction

### 1.1 Overview

This satellite receiver was designed for digital free-to-air (unencrypted) signals. It enables you to tune in on the hundreds of digital television and radio channels broadcasting to your region, with the highest video, audio and data quality attainable with current technology. It performs numerous functions to provide you with a variety of services.

## 1.2 Main Features

- Fully Compliant with MPEG-2 and DVB Standards
- O.A.D (On Air Downloading): Via Satellite
- Built-in Teletext Decoder (STV/VBI)
- PIG (Picture In Graphics)
- MPEG-2 Video (MP@ML), MPEG-1 Audio Layer1, Layer2
- 3000 TV and 1000 Radio Programmable Channels
- PLL RF Modulator, UHF 21~69, PAL I/G/B/K
- LNB Control Logic (13/18V, 0/22KHz, 0/12V)
- SCPC/MCPC Reception in both C & Ku Bands
- Digital Tuner with Loop-Through Output
- Wide Symbol Rate 2~45Mbps & Frequency 950~2150MHz Inputs
- DiSEqC 1.2 Capable
- Manual PID Insertion
- Direct Channel Selection from EPG
- 8 Colour OSG with 16 Levels of Transparency
- 4 digit 7 segment LED
- Variable Screen Aspect Ratio (4:3, 16:9)
- Favorite Channel and Parental Lock Functions
- RS-232C Port for Additional Information Service and System Software Upgrading

# 2. Safety/Precautions

## 2.1 Safety

- Be sure to read this manual before you start operating the unit.

- Do not touch the power cord with wet hands, as that may cause electric shock.

- Never open the cover. It is very dangerous to touch the inside of the unit, due to possible electric shock.

- Place the unit in an adequately ventilated and cool environment.

- When not in use for a long time, it is recommended that the power cord be disconnected from the mains. Also, make sure you do not use the unit with a damaged power cord, as this may cause electric shock or fire.

- A professional installation is required. If reception is interrupted, contact your authorized local service center.

## 2.2 Precautions

### When installing the unit

- Install the unit on a level horizontal plane. Unleveled installation may cause damage to the unit.

- Do not put heavy items, such as a TV, on top of the unit. That may cause damage to the unit.

- Do not install the unit where: it may be subject to vibrations
  it is exposed to direct sunlight
  there is humidity
  temperature may be too high or too low
  there is no adequate ventilation

- Moving the unit from a cold area to a hot one will cause condensation. In such a case, leave the unit to dry for a couple of hours, before you operate it.

## 3. Accessories

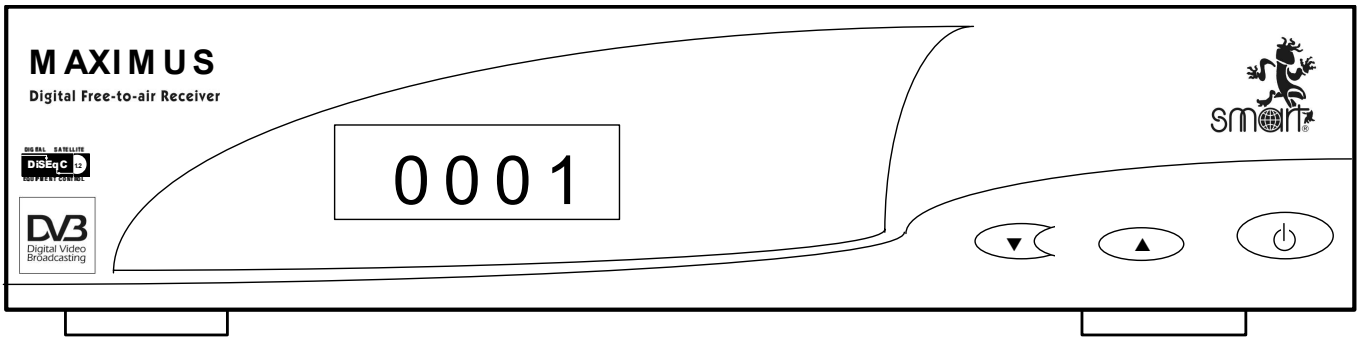
### The following have been packed in your receiver box:

User's manual: 1 Pc.
Remote control: 1 Pc.
Batteries (AAA Type): 2 Pcs.
RCA Cord (Y, W, R): 1 Pc.

* If any accessory listed above is missing, contact the point of purchase.

# 4. Controls/Functions

## 4.1 Front Panel



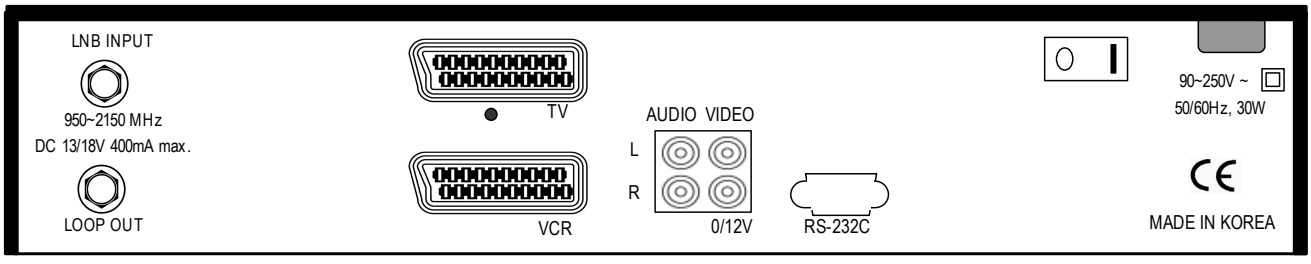

**- Power Button**
switches the receiver between "Stand-By" and "On" modes

**- LED (4 Digit)**
displays the time when in "Stand-By" mode and the channel number when the unit is operating.

**- IR Sensor**
detects the infra-red command signals generated by the remote control handset

**- Channel ▲ & ▼**
move the cursor Up or Down in an application screen or change channels sequentially Up or Down in normal operation.

## 4.2 Rear Panel




**❖. LNB IN PUT:**
IF input from LNB to digital tuner

**❖. LOOP OUT**
IF loop-through output from digital tuner

❖. **AUDIO-L**
Left audio output

❖. **AUDIO-R**
Right audio output

❖. **VIDEO**
Composite video output

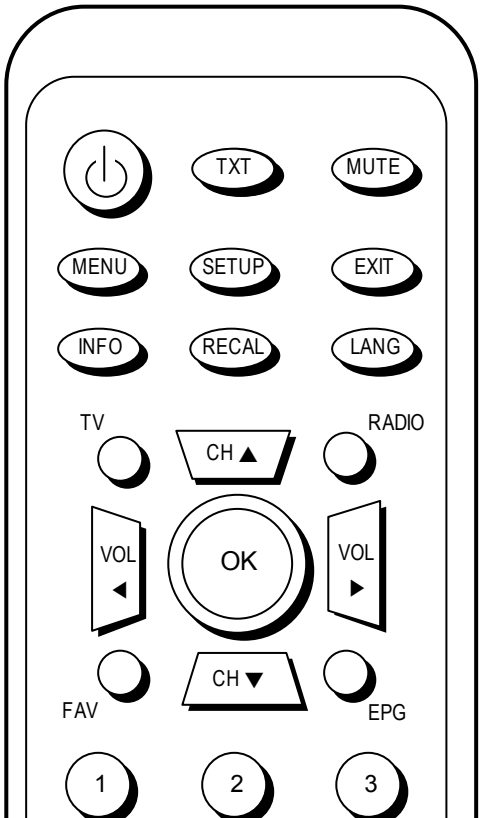
❖. **0/12V**
Used for switching satellite(LNB)

❖. **TV SCART**
SCART output to TV

❖. **VCR SCART**
SCART output to VCR, analog receiver or Hi-Fi

❖. **RS-232C**
Low speed serial port

## 4.3 Remote Control Handset



- **Power:** switches the receiver between Stand-By & On modes
- **Mute:** mutes the audio output
- **Numeric Keys (0~9):** for direct entry of channel number or input of alphanumeric characters
- **EPG** (Electronic Program Guide): provides programme content information. Press again to return to viewing mode
- **MENU:** accesses the main menu
- **SETUP:** accesses the receiver set-up menu
- **EXIT:** To return to previous status or menu
- **CH (▲/▼):** change channels sequentially up or down in viewing mode and move the cursor up or down in an application screen
- **VOL (◀/▶):** alter the audio output level up or down in viewing mode and change the selected item's setting in an application screen
- **OK:** selects an item or confirms a choice
- **INFO:** displays the available information on the viewed channel
- **TV/RADIO:** switches between TV & Radio channels lists
- **LANG:** select sound mode or audio language
- **FAV:** displays the current favorite channels list
- **TXT:** displays the teletext contents of the viewed channel, if teletext is transmitted
- **RECALL:** goes back to the previously viewed channel

# 5. Using The Remote Control

## 5.1 Batteries

**- How to insert the batteries**

. Open the cover at the top of the rear side of the handset
. Insert two 'AAA' type batteries (1.5V), respecting the indicated polarity +/- signs
. Close the cover

**- When to replace the batteries**

. When the operational range of the handset gets smaller, or when the receiver no longer responds to each and every command. Always replace both batteries at the same time.

**- Accident prevention**

. Do not recharge, heat or disassemble the batteries
. Make sure the intended polarity alignment is respected
. If the handset is not going to be used for some time, take the batteries out. If not, the batteries may leak and cause damage to the handset

## 5.2 Range Of Operation

. The operating range of the handset is within +/- 30 degrees on both the vertical and horizontal planes of the Infra Red sensor
. Transmission distance does not exceed 7m

*** Notes**

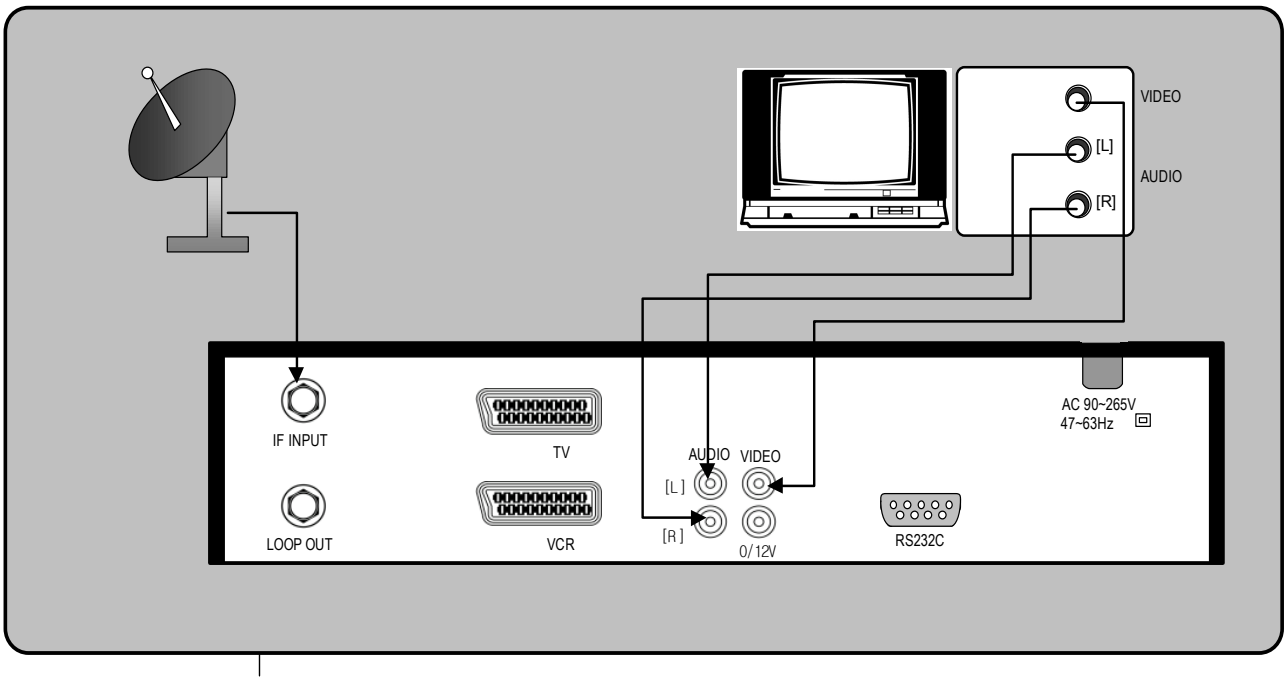
**- When the handset is not operational**
Replace the batteries and make sure the receiver is connected to the power supply

**- Abnormal operation**
Disturbance from peripheral devices may occur. You will need to move the object that is generating the disturbance.

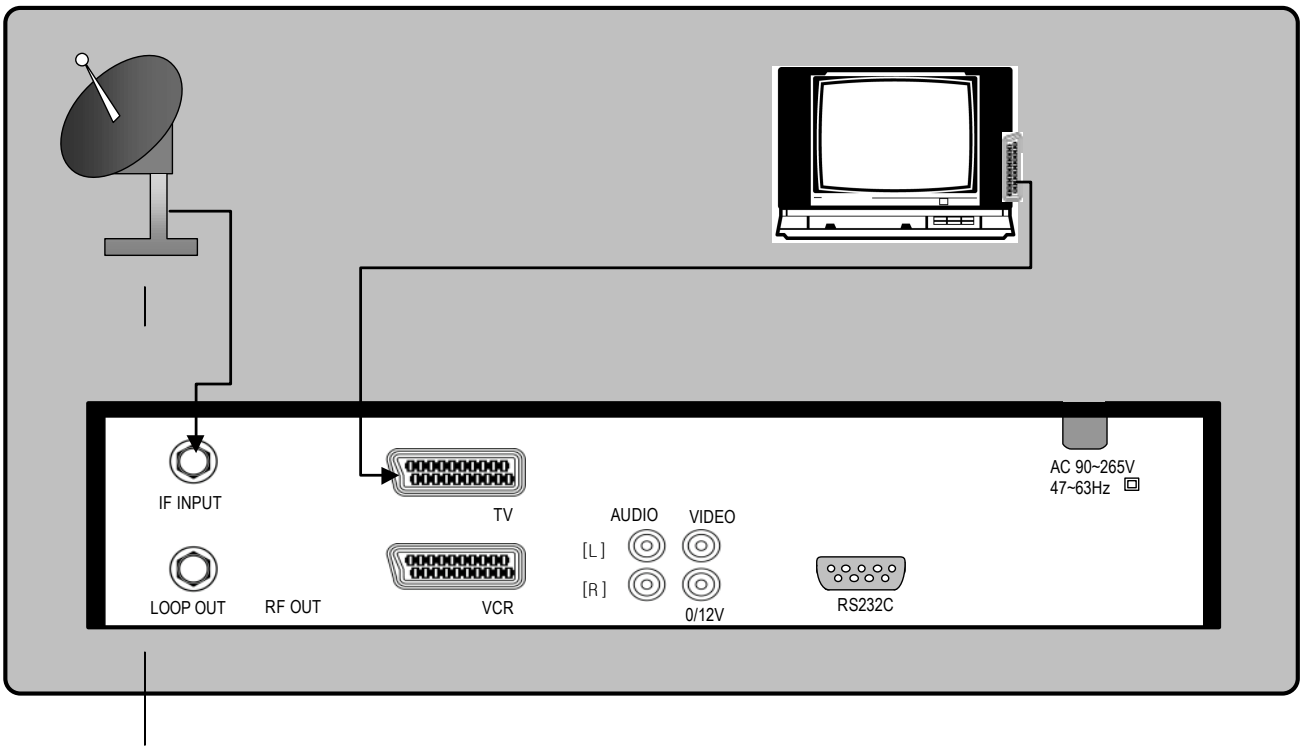
**- Notes for handling**
In the event the receiver is exposed to heat or water, operating it could be dangerous. Have the unit checked by a qualified technician prior to operating it again

# 6. Connecting The Receiver

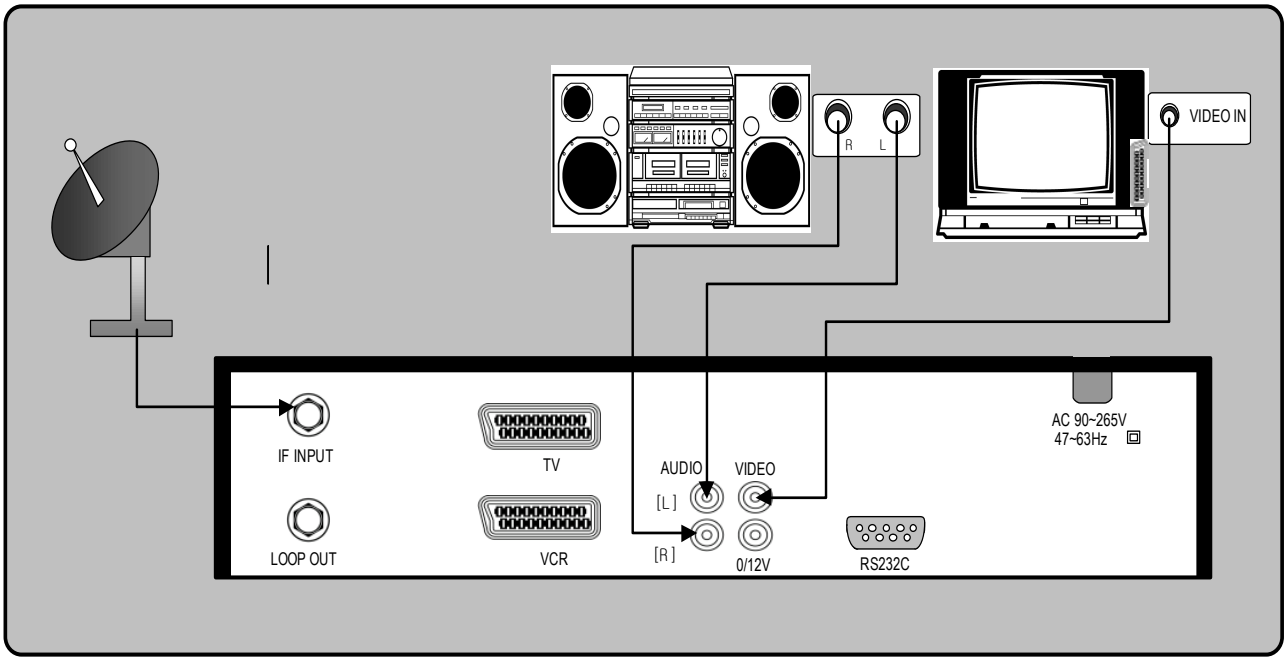
## 6.1 To a TV set, using both A/V connections



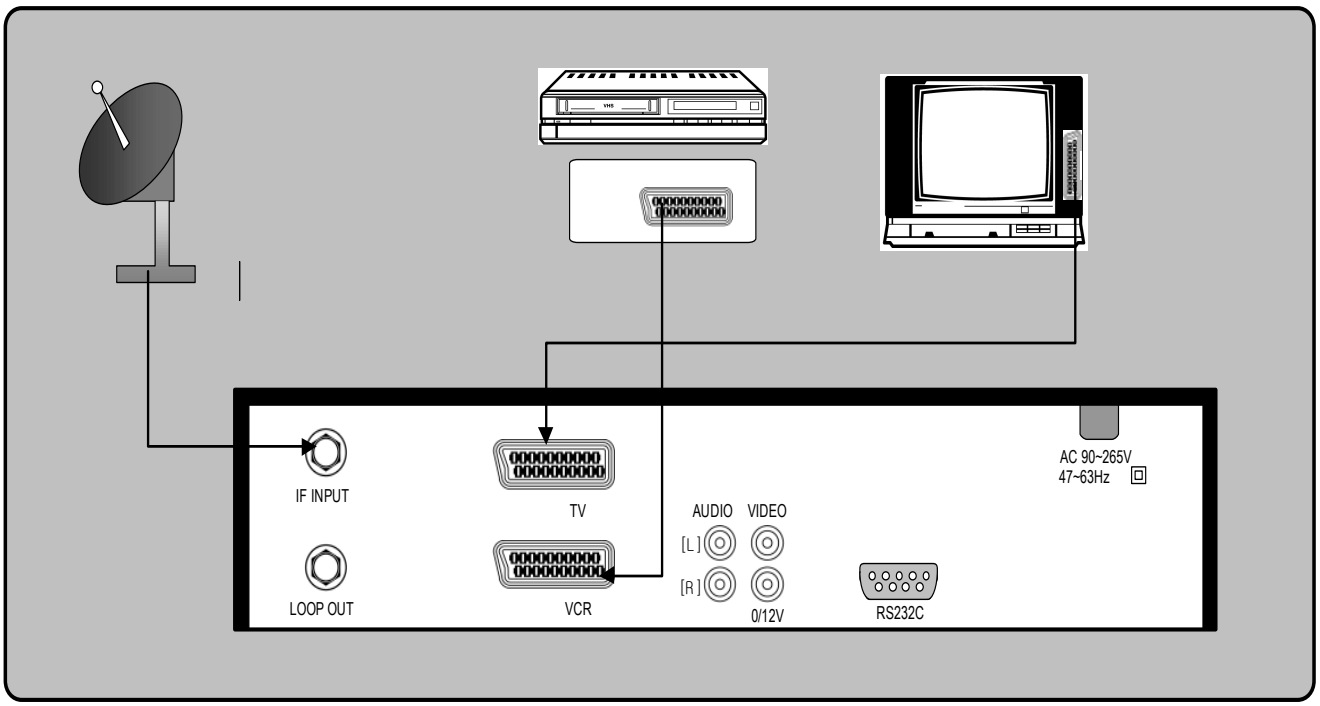

## 6.2 To a TV set, using both SCART connections




## 6.3 To a Hi-Fi system and a TV set, using both A/V connections



### 6.4 To a VCR and a TV set, using both SCART connections




## 7. Setup and Operation

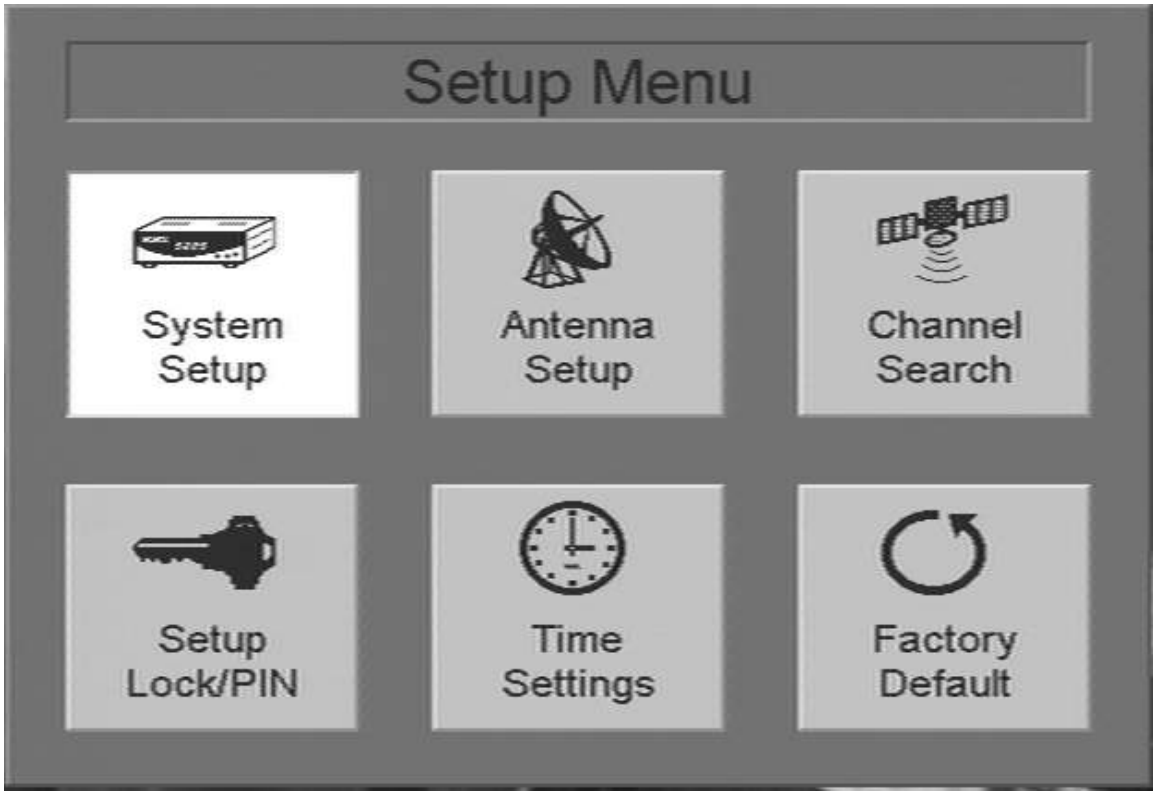
### 7.1 Before Setup

- Information
A menu is a field of text, displayed on the TV screen. Selectable menu items are generally highlighted. Items that are not highlighted cannot be selected. Most menus display explanatory information at the bottom of the screen.

### 7.2 Setup Menu

To install the receiver properly you have to perform a "Setup Procedure". After you finish the setup procedure, you can start watching TV or listening to Radio. During the basic settings, a short information is displayed at the bottom of the menu screen.

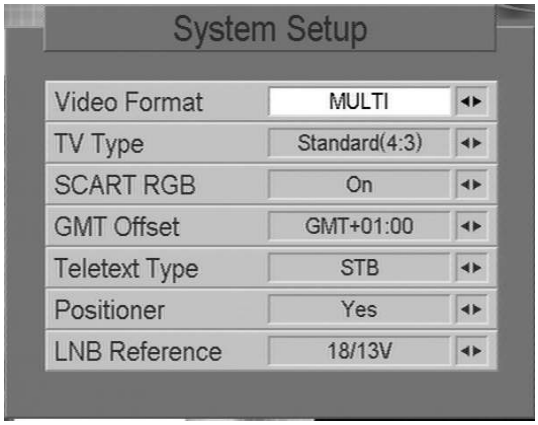
. Turn on your TV and receiver
. Press the **SETUP** button to display the setup mode.




. Use the **CH ▲/▼**, and **Vol ◀/▶** buttons to move across a menu page.
. When you have reached the required item, press the **OK** button to confirm your choice.
. Press **EXIT** to return to quit the mode.

## - System Setup

Press the **OK** button on 'System Setup' in the Setup Menu. The following window will appear. Set the Video Format, TV Type, Scart RGB output, GMT Offset, TTX Type, Positioner and LNB Reference.

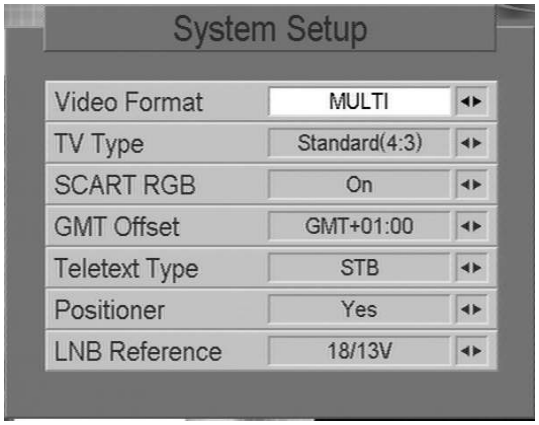



**Video Format:** PAL I, B, G or K/ SECAM/ MULTI/ NTSC
**TV Type:** Standard (4:3) / Wide (16:9)
**Scart RGB:** On / Off
**GMT Offset:** +12:00 ~ -12:00
**Teletext Type:** STB (Normal TV Mode) / VBI
**Positioner:** On / Off
**LNB Reference:** 18/13V, 19/14V

. Use **CH ▲/▼** to move up and down the list.
. Use **Vol ◀/▶** to change the setting.
. Upon reaching the required menu line, press **OK** to enter the setting.
. Press **EXIT** to go back to the previous mode.

## - Antenna Setup

Press **OK** on 'Antenna Setup' in the Setup Menu. The following window will appear. Set the Satellite, LNB Frequency, 22KHz Tone, 0/12V Switch, DiSEqC mode and LNB Power.

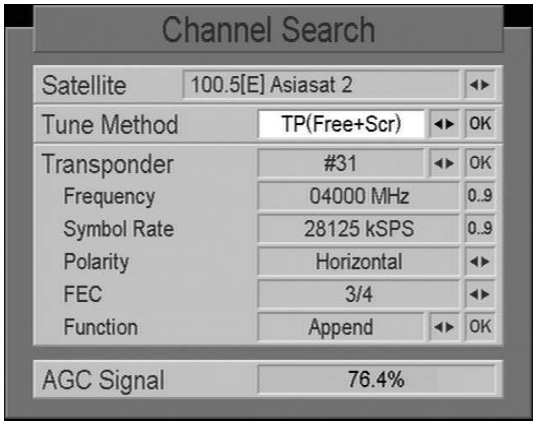



**Satellite Name:** from the stored list.
**LNB Frequency:** Universal / Wide Band / OSC C-Band / C-Band
**High L.O.:** enter the frequency
**Low L.O.:** enter the frequency
**22kHz Tone:** On / Off
**0/12 Volt Switch:** On / Off
**DiSEqC:** Off / DiSEqC A, B, C or D / Tone A or B
**LNB Power:** H/V / 14V / 18V / Off

. Use **CH ▲/▼** to move up and down the list.
. Use **Vol ◀/▶** to change the setting.
. Upon reaching the required menu line, press **OK** to enter the setting.
. Press **EXIT** to go back to the previous mode.

## - Channel Search

Press **OK** on 'Channel Search' in the Setup Menu. The following window will appear. Set the Satellite, Tune Method, Transponder, Frequency, Symbol Rate, Polarity, FEC and Function.




**Satellite Name:** from the stored list.
**Tune Method:** Sat (Free) / Sat (Free+Scr) / TP (Free) / TP (Free+Scr) / NIT (Free) / NIT (Free+Scr)
**Transponder:** 1~32
**Frequency:** Auto / Manual
**Symbol Rate:** Auto / Manual
**Polarity:** Horizontal / Vertical / Right / Left
**FEC:** Auto, 1/2, 2/3, 3/4, 5/6, 7/8
**AGC Signal:** Indicates received signal strength level.

. Use **CH ▲/▼** to move up and down the list.
. Use **Vol ◀/▶** to change the setting.
. Upon reaching the required menu line, press **OK** to enter the setting.
. Press **EXIT** to go back to the previous mode.

## - Setup Lock/PIN

Press **OK** on 'Setup Lock/PIN' in the Setup Menu. The following window will appear. Set the Menu Lock, Change the PIN, enter the New PIN and confirm the Confirm PIN.

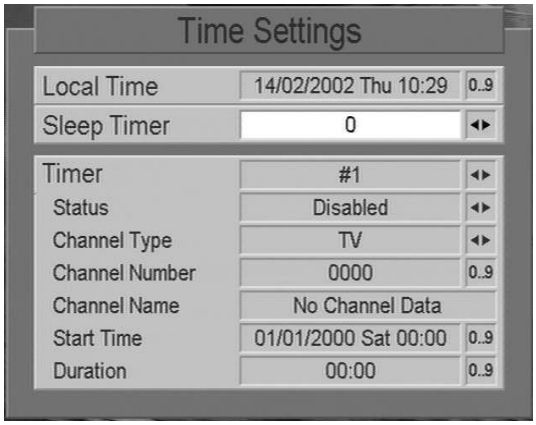
**Menu Lock:** On/Off
**Change PIN:** Press **OK** if you want to change.
**New PIN:** Enter your new 4-digit code
**Confirm PIN:** Confirm your new 4-digit code

*** Note: The default PIN is '1234'**

. Use **CH ▲/▼** to move up and down the list.
. Use **Vol ◄/►** to change the setting.
. Upon reaching the required menu line, press **OK** to enter the setting.
. Press **EXIT** to go back to the previous mode.

## - Time Setting

Press **OK** on 'Time Setting' in the Setup Menu. The following window will appear. Set the Local Time, Sleep Time, Timer Status and Program the Timer.

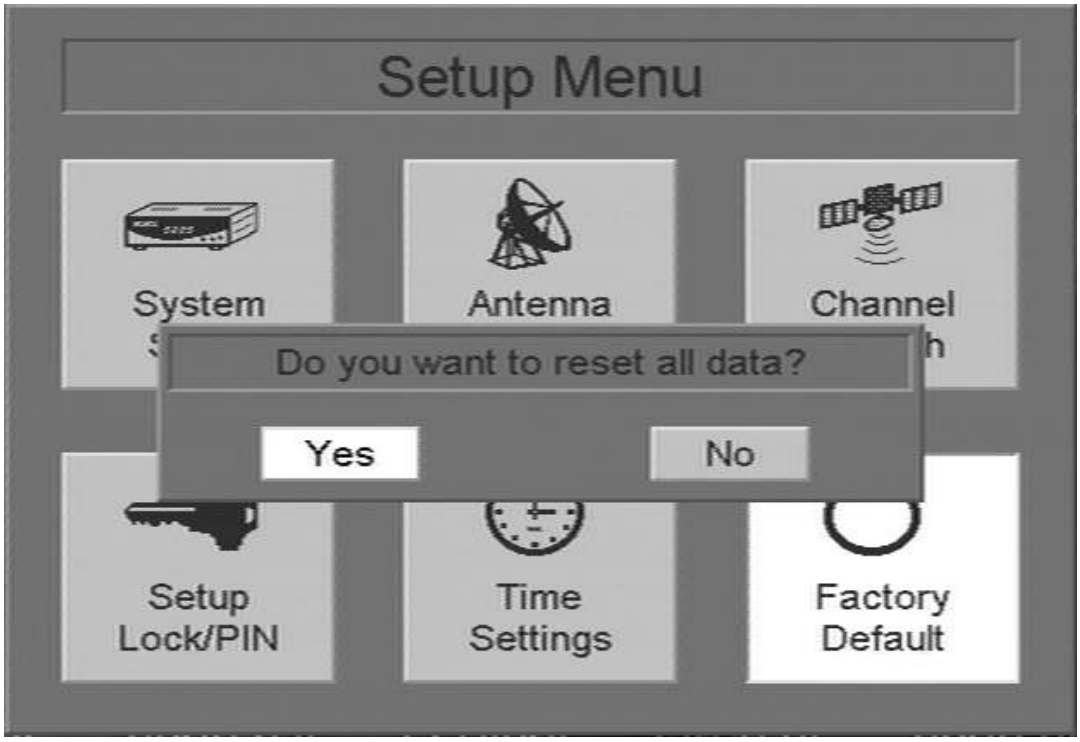



**Local Time:** dd/mm/yyyy - day - hh:mm
**Sleep Time:** 0~180 min

. Use **CH ▲/▼** to move up and down the list.
. Use **Vol ◄/►** to change the setting.
. Upon reaching the required menu line, press **OK** to enter the setting.
. Press **EXIT** to go back to the previous mode.

## - Factory Default

Press **OK** on 'Factory Set' in the Setup Menu. Confirm whether you wish to go back to the factory default settings.




## 7.3 General Viewing Information

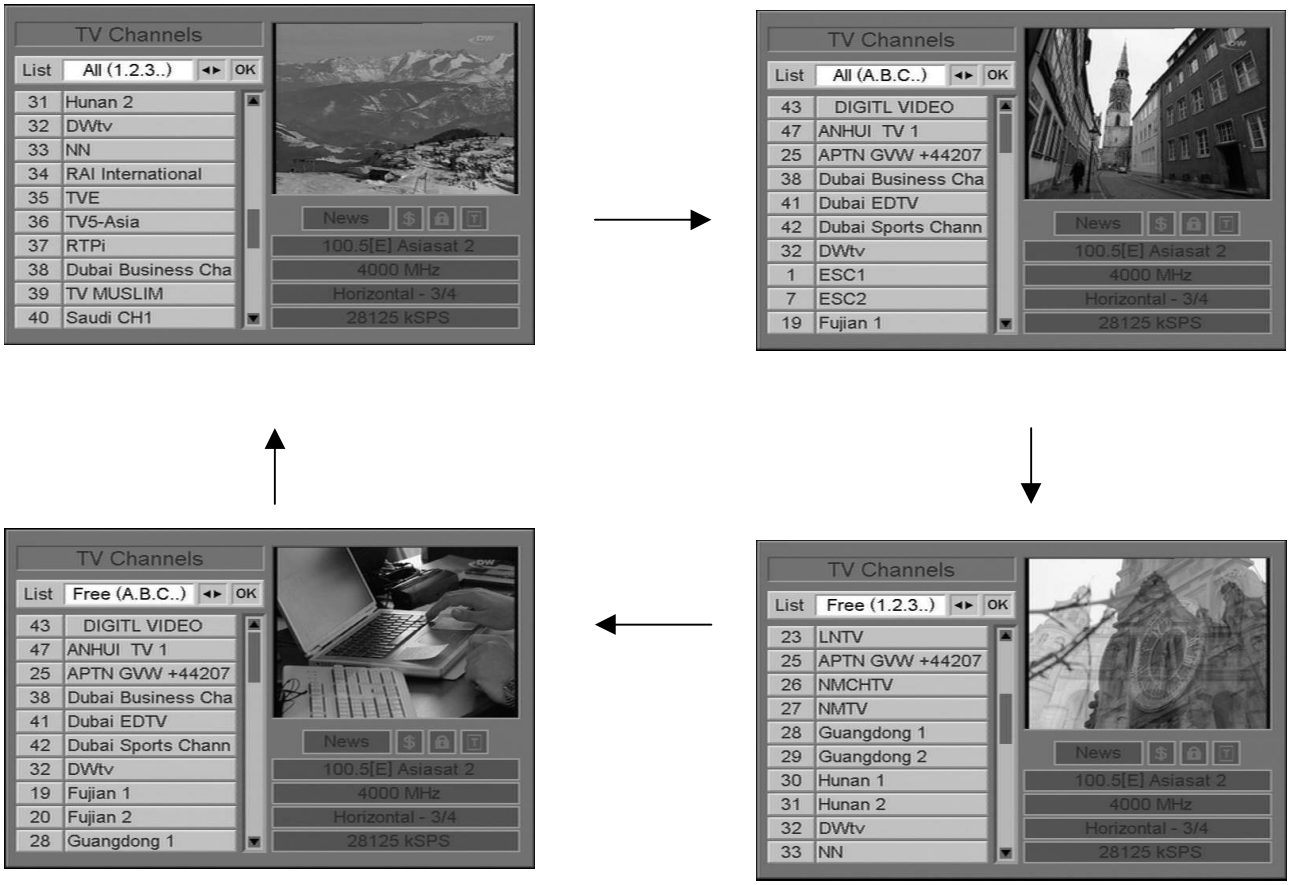
**- Program Information**

Information on the currently viewed program appears for a few seconds, when you press **INFO**.

- TV/Radio Channels List

While watching TV you can call the channel list by pressing **TV/Radio**. The picture in the preview screen is that of the highlighted channel, which can be changed with the **CH ▲/▼**. **Vol ◀/▶** scrolls Channel List pages Down or Up. Pressing **OK** on a highlighted channel calls that channel and exits the Channel List. Press **EXIT** to close the Channel List.

<TV Channel List>




<Radio Channel List>

**- Favorite Channels Lists**

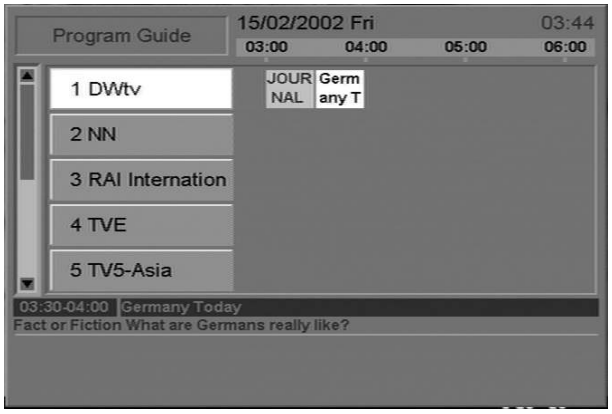
While watching TV or listening to Radio you can call the respective favorite channels list by pressing **FAV**. If the list is empty, it will not appear.

<Favorite TV>

<Favorite Radio>

**- Program Guide**

Press **EPG** to access the electronic program guide, if available from the broadcaster.




**- Language**

Press LANG to access the audio language selection screen.

**Track:** 1 of 1,2...

**Mode:** Stereo / Mono Left / Mono Right

**Level:** Normal / High / Low

**Language:** unknown

**- Recall**

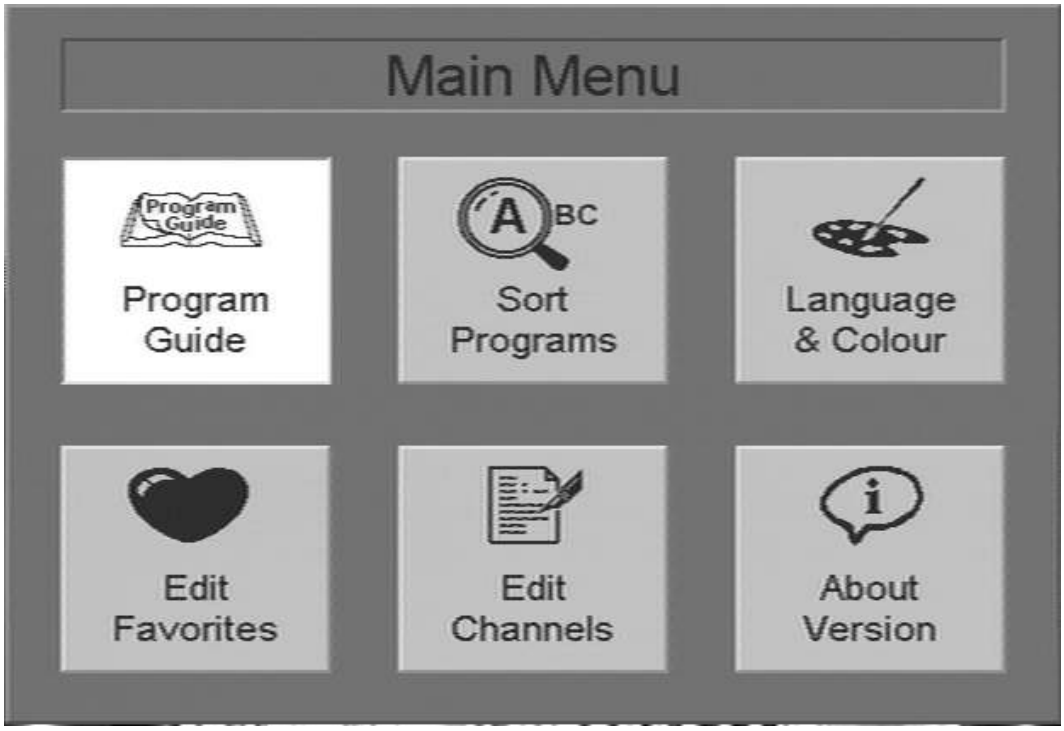
Press **RECALL** to recall the previous channel.

**- Teletext**

Press **TXT** to access the teletext service if available from the broadcaster.

## 7.4 Main Menu Settings

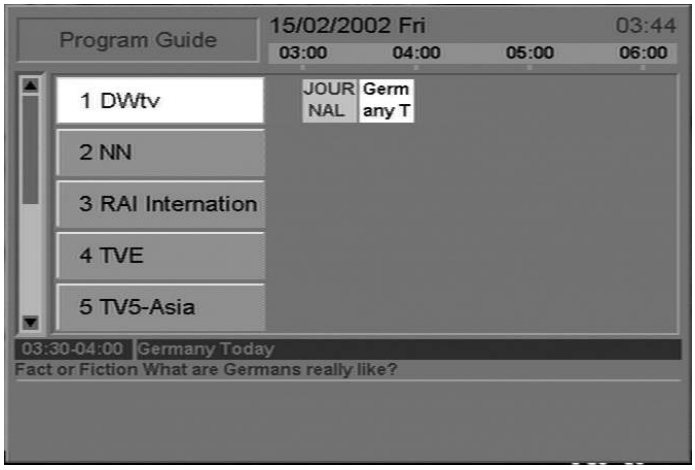
From the Main Menu you access the Program Guide, Channel Sorting, Language & Color Preference Settings, Favorites Editing, Channel Editing and Software Version information.




. Press **MENU**
. Use **CH** ▲/▼ to move up and down the list.
. Use **Vol** ◄/► to change the setting.
. Upon reaching the required menu line, press **OK** to enter the setting.
. Press **EXIT** to go back to the previous mode.

**- Program Guide**

Press **OK** on 'Program Guide' in the Main Menu. The following window will appear.




. Use CH ▲/▼ to move up and down the list.
. Use Vol ◄/► to move sideways across a channel line.
. Pressing OK on the highlighted channel calls that channel to the background.
. Press EXIT to go back to the previous mode.

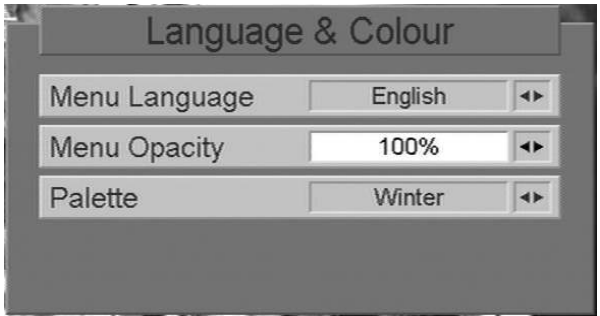
## - Sort Programs

Press OK on 'Program Search' in the Main Menu. The following window will appear.

. Use Vol ◄/► to select an alphabetical letter.
. Press OK to confirm your choice.
. Use CH ▲/▼ to move up and down the list.
. Use Vol ◄/► to scroll pages Down or Up.
. Pressing OK on the highlighted channel calls that channel and closes this menu.
. Press EXIT to go back to the previous mode.

## - Languages & Colours

Press OK on the 'Language Preference'. The following window will appear. Select the menu language, default audio language, menu opacity, and palette setting.



**Menu Language**: Select English / Arabic / Deutsch /
Francais
**Menu Opacity**: 20~100 %
**Palette**: Summer / Autumn / Winter / Jungle/
Undersea /Sun Flower / Sky / Spring

. Use **CH ▲/▼** to move upwards and downwards in the menus.
. Use **Vol ◄/►** to change the values in the alternatives.
. When you have reached the required subject menu, press **OK** to confirm your selection.
. Press **EXIT** to go back to the previous mode.

## -. Edit favorites

Press **OK** on the 'Edit Favorites'. The following window will appear.
Select the Edit favorites menu.

TV/Radio Favorite

Move Favorite

Favorite category

Delete Favorite

. Use **CH ▲/▼** to move upwards and downwards in the menus.
. Use **Vol ◄/►** to change the values in the alternatives.
. When you have reached the required subject menu, press **OK** to confirm your selection.
. Press **EXIT** to go back to the previous mode.

## -. Edit Channels

Press **OK** on the 'Edit Channel'. The following window will appear.
Select the Edit channel menu.

TV/Radio Channel

Move Channel

Favorite

Lock Channel

Delete Channel

Add Channel

Edit Name

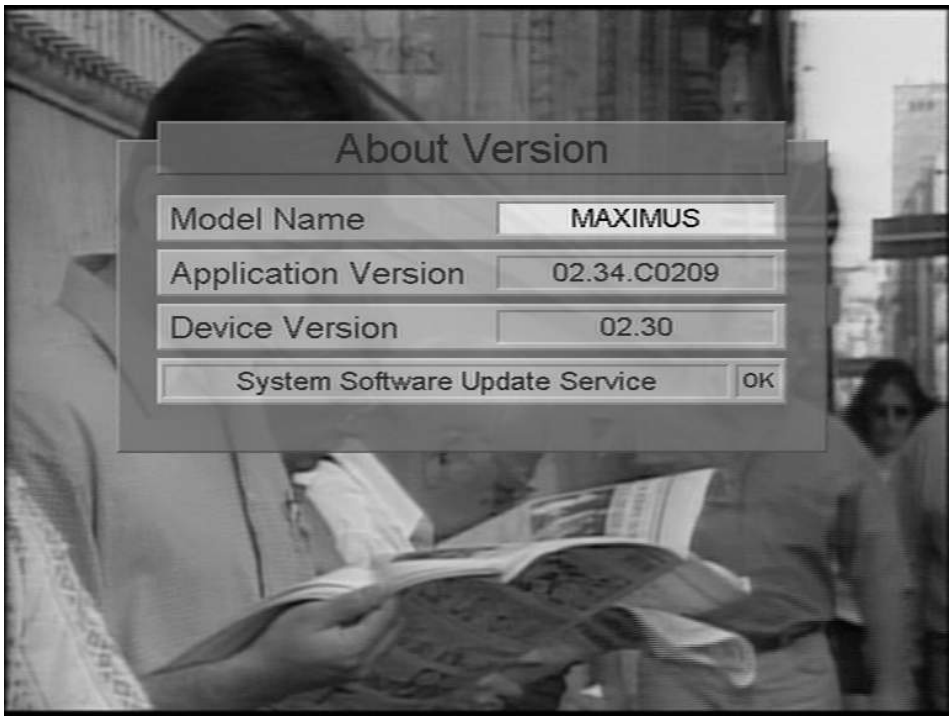
. Use **CH ▲/▼** to move upwards and downwards in the menus.
. Use **Vol ◀/▶** to change the values in the alternatives.
. When you have reached the required subject menu, press **OK** to confirm your selection.
. Press **EXIT** to go back to the previous mode.

## -. About

Press **OK** on the 'About'. The following window will appear.
It shows model name, application ver, and device version.

### Software Update

For Software Upgrade please select the Line "System Software Update Service" and press the OK Button.




. Press **EXIT** to go back to the previous mode.

## Problem solving

There may be various reasons for the abnormal operation of the unit. Therefore, if the unit does not work properly, check it according to the procedures shown in the table below:

| Problem | Possible causes | Remedy |
|---|---|---|
| LED on front panel does not light. | AC power cord disconnected | Connect power cord properly into the power socket |
| No Picture or sound | Wrong connection of the video/audio output to TV input terminal | Connect two terminals correctly with scart cable or RCA or RF cable |

| | | |
|---|---|---|
| | Wrong connection of satellite antenna cable | Connect the antenna cable correctly |
| | Wrong direction of satellite antenna | Adjust the direction of antenna |
| | No signal or weak signal | Check the cable connections, LNB and other equipment connected between the LNB and the receiver or adjust the antenna |
| | Wrong setting of channel information n MENU screen | Type the setting value correctly |
| Black-and- white screen or V-Hold | Your TV mode is different from satellite broadcasting mode | Use same mode as TV<br>Use the NTSC/PAL converter connected to the receiver and TV |
| The remote controller is not working | Battery exhausted | Change the batteries |
| | Fluorescent light interfering with the remote controller | Switch off the light |
| | Remote controller is incorrectly aimed | Aim the remote control at the receiver |

## Specifications

-. System capabilities
Full DVB compliant

-. LNB/Tuner input
Connector: IEC 169-24, female
Frequency range: 950MHz ~ 2150MHz
Signal level: -65dBm ~ -25dBm
LNB supply: 14/18V, max 400mA
LNB switch control: 22KHz, 0/12V
DiSEqC: Ver 1.2 Compatible

-. Demodulator
Front end: QPSK
Symbol rate: 2MSps ~ 45MSps
SCPC and MCPC Capable
Spectral inversion Auto conversion

-. System resource
Processor: 32bit processor (60MHz)
SDRAM: 8Mbyte
FLASH: 2Mbyte

-. Video Decoder
MPEG 2: Main Profile @ Main Level
Data Rate: Up to 15Mbit/s
Resolution: 720x576, 720x480
Video format: NTSC, PAL, SECAM
Aspect Ratio: 4:3, 16:9

-. Teletext

| | |
|---|---|
| DVB compliant: | STV (Normal TV) / VBI |

-. MPEG Audio

MPEG 1 layer 1&2

| | |
|---|---|
| Type : | Mono, Dual mono, Stereo |
| Sampling rates: | 32, 44.1 and 48KHz |

-. Serial data interface

| | |
|---|---|
| Connector: | 9pin D-sub male, Max 115Kbps |

-. Remote control

| | |
|---|---|
| Operating condition: | Up to 7 Meter |

-. Power supply

| | |
|---|---|
| Power consumption: | Max 30W |
| Supply voltage: | 90 ~ 265V/AC |
| Supply frequency: | 47Hz ~ 63Hz |

-. Rear panel connectors

| | |
|---|---|
| Video out: | 1 x RCA cinch |
| Audio L/R: | 2 x RCA cinch |
| 0/12V: | 1 x RCA cinch: |
| Serial data: | 9pin D-sub |
| Digital tuner input: | IEC 169-24 |
| Loop-through Digital tuner: | IEC 169-24 |
| TV SCART: | RGB, CVBS, Y/C, Audio |
| VCR SCART: | CVBS, Y/C, Audio |

-. Physical Specification

| | |
|---|---|
| Size (W x H x D): | 260 x 60 x 185 mm |
| Weight (Net): | 2.0 Kg |